

## Foodcomp workshop

### Module 1 – Activity 2

Subject	Canning and Fermentation Techniques for Stocked Food Preservation
Duration	90 minutes
Students' ages	10+
Type of activities (educational, entertainment, practical, other)	educational and practical
Objectives	<ul style="list-style-type: none"> <li>To familiarize participants with canning and fermentation techniques as effective methods for preserving stocked food and preventing waste</li> </ul>
Methods (presentation, discussion, film screening, brainstorming, teaching games)	<ul style="list-style-type: none"> <li><b>Presentation Method:</b> The facilitator uses this method to demonstrate the canning process, whether using the water bath method for high-acid foods or the pressure canning method for low-acid foods. This involves explaining the steps and techniques verbally and visually to the participants.</li> <li><b>Hands-on Method:</b> The activity encourages participants to actively engage in the canning and fermentation processes. They work in small groups, prepare their selected food items, and follow the demonstrated techniques to practice canning or fermenting themselves.</li> <li><b>Instruction Method:</b> The facilitator instructs participants on proper food preparation, sterilization of jars, filling and sealing techniques, and other essential safety measures for canning and fermentation.</li> <li><b>Demonstration Method:</b> The facilitator demonstrates the process of fermenting vegetables to create sauerkraut or kimchi. This allows participants to observe the steps and techniques involved in fermentation.</li> <li><b>Group Work Method:</b> Participants are divided into small groups, and each group is assigned a different food item to can or ferment. This promotes teamwork and knowledge-sharing among participants as they work together on their assigned tasks.</li> <li><b>Discussion Method:</b> Throughout the activity, discussions are encouraged, especially during the hands-on process. Participants can ask questions, share their experiences, and seek guidance from the facilitator or other group members.</li> <li><b>Teaching Games:</b> Although not explicitly mentioned in the activity description, the facilitator might incorporate teaching games or interactive quizzes to reinforce key concepts, safety guidelines, or knowledge about canning and fermentation.</li> </ul>
Forms of work (individual, group, other)	Work in groups.

Materials needed	Lesson journal, blackboard, PPT presentation, computer, projector, knives, first aid kit, heat-resistant gloves, or mitts, canning and fermentation jars, canning lids and bands, canning rack or basket, pressure canner, pressure canner gauge and safety valve, food items for canning and fermenting (fruit and vegetables), cutting boards, ingredients for canning and fermenting (sugar, non-ionized salt), cooking and preparation area, labels, fermentation weights, brine solution, instructional materials, hand sanitizer and washing station, canned food samples, evaluation sheets, fermented vegetable samples, discussion area, facilitation materials (flipchart or whiteboard), list of prompts and discussion topics, note-taking materials, feedback form
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## Lesson scenario

Duration	Description	Materials used
1 min	<p><b>Welcome and introduction:</b></p> <ul style="list-style-type: none"> <li>• Checking the attendance list</li> <li>• Presentation of the purpose of the lesson</li> </ul>	Lesson journal, blackboard
15 min	<p><b>Recapitulation:</b></p> <ul style="list-style-type: none"> <li>• Recap the lecture on available technologies for secondary processing of stocked food, emphasizing canning and fermentation techniques.</li> <li>• Discuss the benefits of canning and fermentation, such as extended shelf life, preservation of flavor, and creation of probiotic-rich foods.</li> </ul>	PPT presentation, computer, projector
5 minutes	<p><b>Health and Safety Instructions:</b></p> <p>Before conducting the canning and fermentation activity, it is crucial to provide occupational health and safety instructions to ensure the well-being of all participants. Canning and fermentation involve working with hot liquids, sharp objects, and potentially harmful bacteria, so taking proper precautions is essential. Here are some occupational health and safety instructions to consider:</p> <ul style="list-style-type: none"> <li>• Remind participants to be cautious while handling hot liquids, canning equipment, and sharp tools to prevent burns, scalds, or cuts.</li> <li>• Provide participants with appropriate PPE, such as heat-resistant gloves or mitts, to protect their hands while handling hot jars and canning equipment.</li> </ul>	PPT presentation, computer, projector, knives, first aid kit, heat-resistant gloves, or mitts

	<ul style="list-style-type: none"> <li>• Instruct participants to wash their hands thoroughly before and after handling food items to prevent contamination.</li> <li>• Emphasize the importance of thoroughly cleaning and sterilizing canning equipment, including jars, lids, canning racks, and canners, before use.</li> <li>• For the fermentation process, explain the importance of using non-iodized salt and preparing a suitable brine solution to ensure a successful fermentation.</li> <li>• Have a first aid kit readily available in case of minor injuries or accidents.</li> <li>• Before assigning food items for canning or fermentation, inquire about any food allergies or dietary restrictions among the participants to ensure safe choices.</li> </ul>	
45 min	<p><b>Demonstration and Hands-on Activity:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the canning process using the water bath method for high-acid foods or the pressure canning method for low-acid foods.</li> <li>• Provide participants with canning equipment, including jars, lids, canning racks, and canners.</li> <li>• Divide participants into small groups and assign each group a different food item to can.</li> <li>• Instruct participants on proper food preparation, sterilization of jars, and filling and sealing techniques.</li> <li>• Alternatively, demonstrate the process of fermenting vegetables to create sauerkraut or kimchi.</li> <li>• Provide participants with fermentation jars, salt, and the selected vegetables.</li> <li>• Explain the fermentation process, including proper handling and monitoring of fermentation time and temperature.</li> </ul>	<p>canning and fermentation jars, canning lids and bands, canning rack or basket, pressure canner, pressure canner gauge and safety valve, food items for canning and fermenting (fruit and vegetables), cutting boards and knives, ingredients for canning and fermenting (sugar, non-ionized salt), cooking and preparation area, labels, fermentation weights, brine solution, instructional materials, hand sanitizer and washing station</p>
20 min	<p><b>Evaluation and Discussion</b></p> <ul style="list-style-type: none"> <li>• Evaluate canned foods for seal integrity and discuss safety considerations for long-term storage.</li> <li>• Evaluate the fermented vegetables for texture, taste, and desired level of fermentation.</li> <li>• Facilitate a group discussion on the advantages and challenges of canning and fermentation techniques.</li> </ul>	<p>canned food samples, evaluation sheets, fermented vegetable samples, discussion area, facilitation materials (flipchart or whiteboard), list</p>

	<ul style="list-style-type: none"> <li>Encourage participants to share ideas for utilizing canned or fermented products and incorporating these techniques into their daily lives.</li> </ul>	of prompts and discussion topics, note-taking materials
4 minutes	<b>Summary of the lesson, impressions about the work done, conclusions.</b>	feedback form